SUMMARY TRANSLATION OF "RADIO" NO. 10 [OCTOBER] FOR 1987

[Rough, summary translations of articles of possible interest to amateurs, from the monthly magazine RADIO, published jointly by the Ministry of Communication of the USSR and the military training organization DOSAAF.]

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[Translator's comments not appearing in the original Russian version are enclosed in (square) brackets.]

pp 2 - 3: "MEETING OCTOBER" ["VSTRECHAYA OKTYABR'"], [Unsigned lead editorial]

This issue appears on the threshhold of the 70th anniversary of Great October. Traditionally, just before holidays we look at what has been accomplished and, following Lenin's wise advice, we focus on unresolved problems.

This anniversary of the Revolution finds the Soviet people in the midst of a revolutionary restructuring [perestroyka] of all facets of society.

The carrying out of tasks set before the Soviet people by the party is based on scientific-technical progress, which is largely determined by the broad introduction of electronics [shirokaya elektronizatsiya] and larger- and larger-scale use of computer technology in all spheres of human activity. And here's where radioelectronics enthusiasts -- radioamateurs -- do their bit. This issue tells about their activities.

Let's ask ourselves whether independent radioconstruction activity [samodeyatel'noye radiokonstruirovaniye] -- with which the national radio amateur movement began -- is in satisfactory shape.

For over forty years amateur radio in our country has been run by the Defense Society [DOSAAF], and if we consider shortwave activities alone, for over 50 years -- since 1935.

Nonetheless we must state plainly that today the creative potential of independent constructors is not put into operation. Local DOSAAF organizations often pay annoyingly little attention to radio amateurs. In many oblasts and cities the constructors are remembered only on the eve of exhibitions when there's a need to fill an exhibition hall with amateur equipment and then report [to higher authority] on the conduct of the event.

The lessening [spad] of DOSAAF committees' interest in radioamateur-constructors is associated with the period when radioclubs were converted into radio technical schools [RTS's] and combined technical schools [OTS's]. In these educational organizations, which were accomplishing important state tasks in training specialists for the Armed Forces and for the national economy, acceptable ways of running the amateur radio movement were not found, and this despite a series of decisions [resheniya] adopted by the Central Committee of DOSAAF USSR calling for activating work with radio amateurs.

The creation of sport technical clubs [STK's] didn't help much. The name itself -- sport-technical -- means that at best they deal with radiosport. (We won't speak here of the fortunate exceptions, when the STK's work with constructors or even base their activities on construction activity.)

How weakly radioamateur constructors are linked to DOSAAF can be seen by the following figures: There are several millions of constructors in the country, yet only several tens of thousands are in DOSAAF.

Many radio amateurs are calling for the revival of radio clubs as centers of technical creative activity and of radiosport. They are also calling for setting up clubs based on interests. Now, for example, interest in computer technology, personal computers, and programming is snowballing. Computer literacy is an important state task. Computer clubs have begun to operate in several cities, but DOSAAF organizations are standing on the sidelines.

But let's return to radio clubs. Under today's conditions, wide-ranging possibilities are opening up in the search for new organizational forms for their activities. They could operate on a self-supporting [khozraschetnyy] basis.

Speaking of activating amateur radio and of restructuring, we must mention on opinion which it would be hard to agree with. For example, take the reporting and election conference of the Kaluga Federation of Radio Sport [FRS], about which "Radio" magazine has written. [The reference may be to an article in RADIO #03/1987, pp 8 - 9, in which Vladimir Semenovich Mogilev of the Kaluga FRS was reported to have raised the possibility of amateur radio splitting off from DOSAAF.] There's no doubt that the inattention of the DOSAAF oblast' committee lead to a sharp drop in radiosport and construction activity in the Oblast'. But after the DOSAAF oblast' committee had begun to identify corrective measures, a group of radio amateurs decided to take a "special" position, which impeded the measures being put into effect. Unfortunately, this is not the only such instance.

Openness [glasnost'], democracy, and criticism are strong weapons, but they must only be used for the general good and not in the interests of personal ambition.

Sometimes voices are heard calling for amateur radio to leave DOSAAF and look for another "patron"; the argument is made, and it's a fair one, that in recent years many DOSAAF organizations paid little attention to amateur radio (however there are other instances when the opposite occurred -- in Donetskaya, Volgogradskaya, and Penzenskaya Oblasts). But now perestroyka is under way, and it includes DOSAAF operations. The amateur radio community needs to join in this process. Broad possibilities are opening up for new forms of organization through the joint efforts of DOSAAF, trade-union, and komsomol [party youth affiliate] organizations.

DOSAAF doesn't have many staff employees, and one facet of restructuring involves the revival of volunteer work. By the way, there is every reason to believe that the volunteer fervor of many radio amateurs has faded (there may be objective reasons for this). Often they display extremely little personal initiative and perseverance in solving even simple amateur radio and radiosport problems at the local level.

During the 33rd VRV [Vsesoyuznaya radiovystavka - All-Union Radio Exhibition] leaders of the radioelectronics ministries and of the Central Committee of DOSAAF USSR had a meeting. An agreement on principles was reached on joint work to develop amateur radio. It is to be hoped that the appropriate administrations of the Central Committee of DOSAAF USSR will make full use of the suggestions offered at the meeting.

The pages of "Radio" magazine have told of possible ways to restructure the running of amateur radio construction and of the problem of achieving mass participation in radiosport. However, the editors are not yet aware of the opinions of the appropriate administrations of the DOSAAF Central Committee on the suggestions made.

pp 4 - 5: "CHAMPION" [? - "PODVIZHNIK"], by M. Podorozhanskiy, Kaluga - Moscow.

[Introduction]

"Radio-1" and "Radio-2" were launched 26 October 1978; linked to this event were the names of Vladimir Leonidovich Dobrozhanskiy, Vladimir Borisovich Rybkin, Vladimir Il'ich Chepyzhenko, Aleksandr Pavlovich Papkov [UA3XBU], and Leonid Mikhaylovich Labutin [UA3CR]. A series of six amateur satellites was launched 17 December 1981. And now a new success: On 23 June 1987, the callsigns RS10 and RS11 rang out. On these pages we'll tell about the creators of the amateur satellites and about the equipment carried in the satellites.

[Translator's note: In the article that follows, Aleksandr Pavlovich Papkov is sometimes referred to as Papkov, his family name, and sometimes -- as in the original article -- as Aleksandr Pavlovich, his first name and patronymic.]

[Article proper]

Aleksandr Pavlovich Papkov's native village of Puchkovo is located a few kilometers from his new apartment in Kaluga, on the opposite side of the Oka River. And it was in his village, not in the industrial city, where he was first bitten by the radiotechnology bug.

In the early '60's, boys were crazy over pocket radios. Papkov assembled them for himself and for friends.

He graduated from 11-year school and from tuition-paying DOSAAF courses for radiomechanics. But it soon became clear that this wasn't enough for the personnel department of the electromechanical plant, so he got a job in a television repair workship, going around to neighboring villages repairing television sets and earning pretty good money... But he wanted to get inside radiotechnology, to create it by himself! True, he did think up something: He put together television sets and participated and won [prizes] at exhibitions.

The chief of one of the shops at the Kaluga electromechanical plant, hearing about this, agreed to take on the eighteen-year-old lad as a second-category radiomechanic. In four years he advanced to the sixth category, the highest, and was named the best rationalizer [? - ratsionalizator] in the plant. Implementing just one of his suggestions resulted in freeing up nearly half of the area occupied by a large workshop.

Now the brigade run by Papkov is one of the best in the enterprise.

"THERE'S ENOUGH HERE FOR SEVERAL CANDIDATE [OF TECHNICAL SCIENCES] DISSERTATIONS"

This was the reaction of a prominent scientist who had seen amateur-satellite equipment designs by Papkov and his assistants.

But [even] before his "space phase" Aleksandr Pavlovich was famous among radioamateurs as the creator of original sport equipment.

During all-Union sport radiodirectionfinding competitions that took place in Kaluga, one of the organizers was complaining that up to that point a person had to be attached as an accessory to each transmitter [in foxhunting exercises]. By the time the competitions had ended, Papkov had made a device that took the place of the "fox" operator. He took the design to Moscow, where he met Vladimir Borisovich Rybkin, at the time engaged in designing "fox" transmitters at the Central Radio Club of the USSR Named After E. T. Krenkel'. Their two systems fit together well, and soon Papkov's device was tried out at international competitions. But this was perhaps not the most important result of Aleksandr Pavlovich's making the acquaintance of leading radioamateurs in the capital. For it was at that point that the suggestion was made to him that he "tear himself away from Earth" and work on radio technical equipment for amateur satellites.

In the initial stage it was necessary to design and make telemetry equipment for the "Radio-1" and "Radio-2" satellites. Papkov worked alone, assembling complicated boards [platy] in a home laboratory, "on his knee" as the saying goes.

His tasks were broadened in the creation of "Radio-3" and "Radio-4." To telemetry systems were added secondary power sources, command systems, on-board "logic," an automatic "bulletin board," and a "robot" automatic answerer able independently to carry on communications with radioamateurs on Earth. Independent constructors from Moscow, the Byelorussian town of Molodechno, and Kaluga worked on the satellites.

Working on his favorite subject became both simpler and more complicated. Simpler because there appeared a laboratory -- spacious premises under the very cupola of the Museum of the History of Cosmonautics Named After K. E. Tsiolkovskiy, and [there also appeared]]] like-minded people -- the first of whom, V. Samkov, worked with Papkov in the same brigade. Up to the present time Samkov remains Papkov's closest associate. More complicated because Papkov was given more and more serious tasks. For besides the "Radio" satellites the Kalugans, together with students from the Moscow Aviation Institute, designed all of the equipment for the "Iskra" satellites. Valeriy Mel'nikov and Yevgeniy Sinel'nikov joined in the creative search. Mel'nikov worked on the telemetry converters [preobrazovateli] and Sinel'nikov on secondary power sources.

On 17 May 1982, the "Iskra" satellite was placed in orbit. But not everything went well. The satellite operated excellently on transmit, but refused to receive signals. In November 1982 the next satellite, the "Iskra-3," was delivered to the orbital complex "Salyut-7" on the "Progress-16" spacecraft [korabl']. After completing the unloading of the transport vehicle, the cosmonauts threw the "bucket" ["vedro"] overboard (the satellite got the nickname "bucket" from its shape), and the first signals from orbit were received on Earth. This time the amateur satellite operated normally on both receive and transmit.

The design of on-board radiotechnical complexes [bortovyye radiotekhnicheskiye kompleksy] BRTK-9 and BRTK-10 was the greatest achievement of the Kaluga radioamateurs.

"The work was very intense [napryazhennaya]," recalls Aleksandr Pavlovich, "there was little free time in each family. Zhenya [nickname for Yevgeniy] Sinel'nikov withdrew. In general I understand him; not every wife will put up with her husband spending all his evenings in the laboratory... Therefore we decided that each one would work on his part of the job at home. We met in the laborabory only to decide common matters, for tests, and for adjusting the complex. On these occasions, Yevgeniy Levin, a young engineer, joined us. He fully replaced Sinel'nikov, and soon began to perform broader tasks."

In the process of working on the BRTK-9 and BRTK-10, many questions arose. One of these was, what if, in parallel with ultrashortwave, we provided for the possibility of operating on shortwave as well? There were many arguments. Some maintained that the satellite should have only ultrashortwave: Shortwavers, in their opinion, could communicate over great distances without the aid of a satellite. Others (this position was defended by Papkov) considered that the introduction of shortwave would attract a greater number of radioamateurs to satellite communication, thereby making satellite communication truly a mass phenomenon. They settled on a solution that left the wolves full and the sheep intact: Reception and transmission should take place on ultrashortwave as well as on shortwave.

BRTK-9 received the gold medal of the Exhibition of Achievments of the National Economy of the USSR and was shown at the world exhibition "TELECOM-83" at Geneva. New ideas came to Papkov and work began on an improved complex, the BRTK-10.

Having been at the international exhibition "Soyuz'-86" ["Communication-86"] in Moscow, the Kaluga radioamateurs were struck by the abundance of computer technology used to resolve all manner of tasks. "Earlier I viewed computers with little enthusiasm," admits Aleksandr Pavlovich. The exhibition took place in May. And already by September, a home-made computer, the "Radio-86RK," stood in Paplov's mini-lab at home. An old "Rekord" became the display. Yevgeniy Levin helped assemble the computer. Soon a printer appeared alongside the processor. The printer was assembled from the remains of a teletype machine that had been written off. A regular cassette became the memory.

The computer helped a great deal in building the BRTK-10.

On 23 June 1987 the "Kosmos-1861" satellite, with the repeaters "Radio-10" and "Radio-11" [on board] [and] equipped with the BRTK-10, was placed in orbit around the Earth.

FOR AN IDEA!

We climb up the spiral staircase to the radioamateurs' laborabory.

"Here, of course, the equipment is from yesterday or from the day before yesterday," explains Aleksandr Pavlovich, "but it's good that at least it exists. If you only knew how we got hold of each device by hook or by crook [kakim pravdami i nepravdami my razdobyvali kazhdyy pribor]... ."

I [the author] couldn't get over it. How could equipment be created from "scratch" [ot "nulevogo tsikla"] and brought up to a working model in such a short time?

"After all [explained Papkov], we got tremendous help from radioamateurs from Moscow, from Molodechno, and from the Scientific-Research Space Technology Laboratory of DOSAAF USSR."

It turned out that a certain amount of help was provided: Poorly and shabbily [Khudo-bedno], but they helped with radioparts, and the CC DOSAAF paid small premiums for several designs [razrabotki], although it [also sometimes] happened that Aleksandr Pavlovich and his associates had to pay for some work out of their own pockets.

I [the author] told the radioamateurs [Papkov and his friends] about the first Moscow radiotechnical cooperatives: Their own bank account, the ability at their own discretion to undertake to fill orders, to earn a fair amount of money. With your experience, knowledge, and shrewdness... Maybe it would be worth trying?

Aleksandr Pavlovich was silent a moment.

"No," he said, "a cooperative isn't for us... Of course we would like to resolve matters concerning the availability of components [??? - voprosy s elementnoy bazoy]. Look, there's something more important than money, something that unites us, forces us, as the saying goes, to "work for an idea"...

I left Kaluga with a positive feeling, with a fresh belief that there are people who live and work "for an idea." In Rus' [ancient Russia] they called them champions [podvizhniki].

pp 5 - 8: "RS10 and RS11 Call CQ" ["RS10 i RS11 vyzyvayut na svyaz'"], by A[eksandr Pavlovich] Papkov, UA3XBU, and V. Samkov, RA3XAM, Kaluga.

As reported earlier, on 23 June 1987 the launching took place in the Soviet Union of the artificial earth satellite "Kosmos-1861," on which, in addition to a navigational system, equipment was installed for providing radioamateur satellite communication. This equipment, called On-Board Radiotechnical Complex [bortovoy radiotekhnicheskiy kompleks] BRTK-10, was designed by the Volunteer Space Technology Laboratory attached to the State Museum of the History of Cosmonautics Named After K. E. Tsiolkovskiy [Obshchestvennaya laboratoriya kosmicheskoy tekhniki pri Gosudarstvennom muzeye istorii kosmonavtiki im. K. E. Tsiolkovskogo] in Kaluga.

The basic tasks of the BRTK-10 complex are the following:

--To serve as a repeater of the signals of amateur radio stations in order to increase the stations' operating range;

--to provide two-way amateur communications with an automatic answerer -- a robot;

--to transmit circular reports to a broad circle of radioamateurs.

In addition, the following are included in the tasks of the BRTK-10:

--To transmit to Earth telemetry information on the status of the basic systems of the on-board equipment;

--to control the on-board equipment.

The on-board radiotechnical complex consists of two identical units [komplekty apparatury], differing only with respect to their operating frequencies (Table 1). In some operating modes [V nekotorykh rezhimakh] it is possible for both of them to operate simultaneously and independently. One unit has the call-sign [pozyvnoy] RS10, and the other RS11.

The BRTK-10 repeater differs significantly from those installed in previous amateur satellites. In the first place it is multi-band, in the second place it is multi-mode, and, most important, it no longer fears overloading from powerful signals.

Now signals can be repeated:

--From the 21 MHz band to the 28 MHz band;

--from the 21 MHz band to the 144 MHz band;

--from the 21 MHz band to the 28 and 144 MHz bands simultaneously;

--from the 144 MHz band to the 28 MHz band;

--from the 21 and 144 MHz bands to the 28 MHz band simultaneously.

It's important to stress the fact that at the same time as the technical possibilities of the repeater are being expanded significantly and new bands introduced, the repeater segments opened up earlier by radioamateurs in the 144 and 28 MHz bands are retained. Amateurs may therefore use equipment already in their possession for satellite communication.

The use of the 21 MHz band for repeating opens up broad possibilities. We hope this will introduce a huge army of shortwavers, using equipment already in their possession, to the attractive world of space communication on the various shortwave and ultrashortwave [i.e., HF and VHF] bands.

The structural circuit design [Strukturnaya skhema] of one unit [of the two units] of the on-board radiotechnical complex is shown on the 1st page of the insert.

The basic task of the on-board equipment is to repeat amateur radio station signals in real time, with amplification and frequency shift. This task is accomplished by three groups of devices [tremya gruppami ustroystv]. The first group of devices includes receivers [priyemniki] (PRM) [Rcvr] for the 27 and 144 MHz bands. They provide reception of signals for the repeaters, robots, and on-board memory devices, as well as providing reception of commands from the ground control center. The receivers amplify the signals and change their frequency.

The second group of equipment includes two intermediate-frequency amplifiers [usiliteli promezhutochnoy chastoty] (UPCh) [IF amp] which provide the basic amplification of the signals and form [? - formiruyushchiye] the frequency characteristics of the repeater channels. The IF amplifiers are common to both receivers and are connected to them through an electronic switch. One of the amplifiers (UPCh RTRSh) [IF amp/wide] is constructed in accordance with a circuit

design featuring a common, wide-band, quartz filter [vypolnen po skheme s obshchimshirokopolosnym kvartsevym fil'trom] and an amplitude maximum-signal-level limiter [i amplitudnym ogranichitelem maskimal'nykh urovney signalov]. [Comment: The second element in the abbreviation UPCh RTRSh is not explained; perhaps RTR stands for repeater and Sh for wide or wide-band.]

As is known, repeaters with such amplifiers have a serious drawback. A station wishing to establish a more dependable communication increases its signal level. This overloads the repeater channel and also the transmitter output stage. Other stations, operating at the same time with lower power, are unable to use the repeater beacuse distortions appear throughout the frequency segment and the amplification of the whole channel is lessened. The use of the usual type of AGC [avtomaticheskaya regulirovka usileniya - automatic gain control] even further degrades the quality of the channel. Therefore we decided, in the second IF amplifier (UPCh RTR s ARU) [IF amp/RTR with AGC], to use an AGC system in a limited frequency segment; the whole repeater passband is divided into 10 segments 4 kHz wide and a separate IF amplifier with its own AGC system is used for each. In these circumstances a station's use of excessive power will produce a negative effect in one segment only.

We already noted that the on-board repeaters are not only multi-band but also multi-mode systems. By command from Earth the number of narrow-band IF amplifiers in operation can be changed. The overall repeater band of the IF amplifier with the AGC can be [set to be] 16, 24, or 40 kHz wide.

With the widest passband the maximum strength of each signal at the transmitter output is 0.3 Watts, and with the narrowest it increases to from 0.4 to 0.5 Watts.

For the best adaptation to receiving conditions, one of four levels provided in the repeater channels for reducing the sensitivity (amplification) is established by command from Earth -- by 0, 10, 20, and 30 dB.

Besides the above, the on-board radiotechnical complex includes two IF amplifiers (one per band) for processing command control signals reaching the command-control system as well as the BZU [bortovoye zapominayushcheye ustroystvo - on-board memory device] [memory], and two IF amplifiers (also one per band) for processing signals from the robot. There is provision for decreasing the gain of the IF amplifiers of the automatic answerer by 10 dB by command from Earth.

The third group of BRTK devices includes transmitters for the 28 and 144 MHz bands [peredatchiki 28 i 144 MGts] (PRD 28 MGts i PRD 144 MGts) [xmtr 28 MHz and xmtr 144 MHz]. Their output signals are shifted to higher frequencies and are amplified. The maximum output power of each transmitter is not less than 5 Watts in single-signal mode. The transmitters are economical and their linear third-order distortions are lowered by 35 to 40 dB.

The transmitters are used for repeating amateur radio station signals as well as for transmitting signals of the information and telemetry beacons. The power of each beacon is 0.3 or 1 Watt. The power is established by command from Earth. The transmitters operate one after the other or simultaneously, but when the 144 MHz band is switched on, the receiver for this band is switched off.

Four antennas are installed on board. Each unit uses one half-wave vibrator for the 144 MHz band. The vibrators are in turn connected for reception and transmission. The antennas for the 21 and 28 MHz bands are quarter-wave rods [? - shtyri] common to both units of the BRTK-10 equipment. The 21 MHz antenna is a single one for the receivers of the two units, while the 28-MHz-band antenna has to be switched to the transmitter of one unit or the other.

In addition to repeating signals of earth stations, the BRTK equipment transmits various kinds of information, information which is entered into the on-board memory device [BZU] from Earth. The information memory of the on-board memory device consists of two identical units [bloki] independently controlled and each able to contain 256 letters. Information is transmitted either via Beacon-2 [Mayak-2] (when the robot is switched off) or via Beacon-1 [Mayak-1] (alternating with telemetry information).

Information to be entered into the on-board memory device is transmitted at a speed of 600 Bauds using an anti-interference code.

The automatic answerer -- the robot, like analogous devices installed in the "Radio-5" and "Radio-7" satellites, is intended for conducting two-way contacts with radioamateurs. The new robot is a two-band one and can receive calls from radioamateurs on the 144 and 21 MHz bands. The transfer from one band to the other takes place automatically if no call is received from Earth for one minute. Thus, if for a minute on the 144 MHz band the robot doesn't receive a single call, it is connected to the 21-MHz-band receiver and calls CQ indicating the exact frequency to which the receiver is tuned. If the robot doesn't receive a call for a minute on the 21-MHz band either, it again is connected to the 144-MHz-band receiver. After receiving and answering a call, the robot remains on the same band for one minute more. The robot may be switched for operation on one of the bands [apparently overriding the alternating system just described] from the control center.

The memory capacity of the robot's on-board log installed in the new satellite has grown by a factor of two over its predecessor -- now information on 128 contacts can be kept in it. Information from the on-board log is transmitted on command from Earth to the control center at a speed of 600 Baud in an interference-resistant code, which permits transferring this exhausting operation to the "shoulders" of a computer.

A new command control system has been designed for RS10 and RS11, based on complicated interference-resistant codes. This permits controlling the operation and the operating modes of the on-board equipment with a high level of confidence.

Power is supplied to the BRTK-10 from the on-board network of "Kosmos-1861" (power supply voltage 27 V) via secondary power sources [vtorichnyye istochniki pitaniya] (VIP-9 and VIP-20) [PS-9 and PS-20], based on similarly-timed voltage converters [??? - po skheme odnotaktnykh preobrazovateley napryazheniya]. Consumed power [Potreblyayemaya moshchnost'] is up to 30 W.

The technical status of the on-board equipment is monitored by means of the signals from two telemetry systems.

As is known, the telemetry systems of artificial earth satellites collect and transmit to Earth information on the technical status of on-board equipment, on operating modes, on receipt and execution of control commands, and on many other things necessary for the efficient operation of these satellites. The radioamateur equipment installed in the "Kosmos-1861" satellite contains two telemetry systems [telemetricheskiye sistemy] (TLM) of its own, systems that partially duplicate and complement one another. One of these is a service system and the other (TLM Morze) [TLM Morse] is intended for a wide circle of radioamateurs. The service system TLM accumulates information which is updated on a continuous basis. This information is transmitted by an interference-resistant code at a speed of 600 Baud. At the control center this information is used and processed with the help of computers exclusively.

Telemetry information for radioamateurs, both discrete and analogue information, is transmitted on the beacon frequencies in the form of Morse code signals. This enables any radioamateur to receive, by ear, telemetry information using ordinary radioreceiver equipment and without using any auxiliary devices.

The TLM Morse system makes possible the controlling of 16 analogue and 16 discrete parameters containing information on the operation of the repeater equipment, the on-board memory device [BZU] system, the robot, and the secondary power-supply sources.

Analogue parameters include power-supply voltage to the individual units [bloki], transmitter power, and temperature of power-supply units. Discrete parameters carry information on whether a particular unit is turned on or off, which polling interval - interval oprosa] has been selected, and so forth.

Telemetry information in alphanumeric form is transmitted continuously, cycle after cycle, each [cycle] 1 to 2 minutes in length. A cycle consists of 16 groups and each group consists of two letters and a two-place numeral. Each cycle is preceded by the callsign -- RS10 or RS11.

The letters carry information on which analogue parameter is being transmitted in numbers. This is determined by the combination of the last four elements of the letter index (three elements of the second letter and one element of the first). Discrete information is also contained in the letters. The information is contained in the first letter, or more precisely in one of the letter's elements ["element" apparently refers to a Morse-code dot or dash]: In the first element if this letter is a two-element one and in the second if it is a three-element one. Depending upon whether this [element] is a dot or a dash, one can determine the status of a particular functional unit [uzel of the BRTK-10 (switched on or off, occupied [busy, engaged] or free [available], and so forth.

The information included in the first element of the three-element first letter is service information and is intended for the control center.

[NOTE: Text of article continues on page 15.]

Table [1]

Radio Channel	BRTK Callsign	
	RS10	RS11
Earth - space	21 160 - 21 200 kHz 145 860 - 145 900 kHz	21 210 - 21 250 kHz 145 910 - 145 950 kHz
space - Earth	29 360 - 29 400 kHz 145 860 - 145 900 kHz	29 410 - 29 450 kHz 145 910 - 145 950 kHz
Beacon 1	29 357; 145 857 kHz	29 407; 145 907 kHz
Beacon 2	29 403; 145 903 kHz	29 453; 145 953 kHz
Earth - space	21 120; 145 820 kHz	21 130; 145 830 kHz

[Figure] Functional Block Diagram of Telemetry-Systems

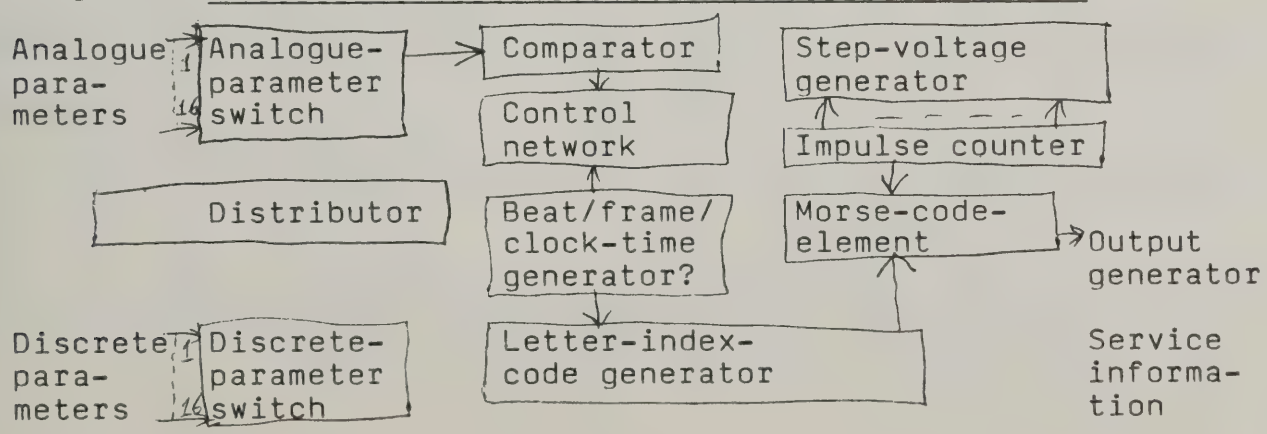


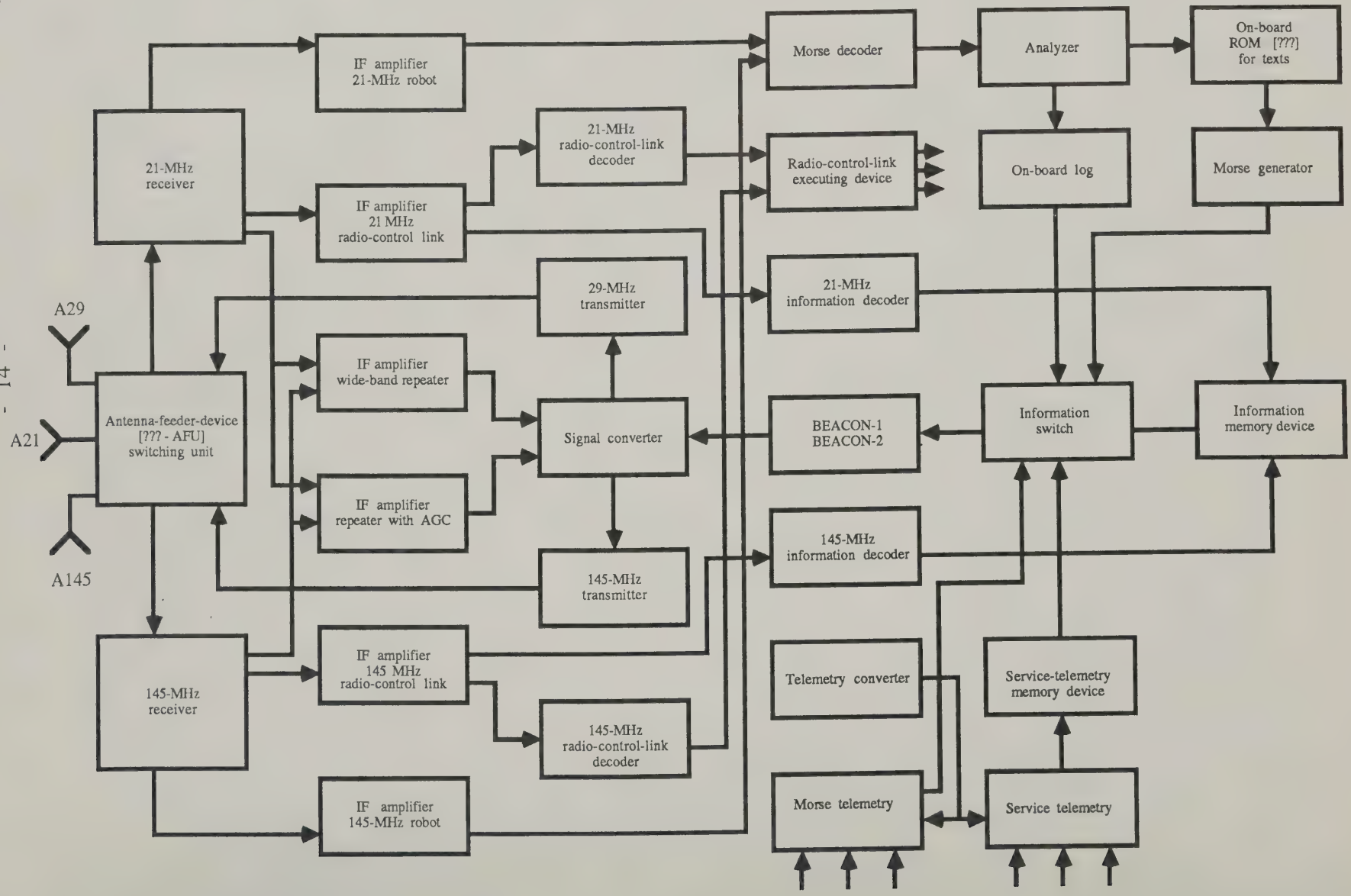
Table 2

Discrete and Analogue Parameters	Values of Discrete Parameters and Letter Indices	Formula for Determining Values of Analogue Parameters	
Service-telemetry-sensor polling interval	90 min.	10 min.	
Voltage of PS-20	IS, SS, DS	NS, RS, GS	N:4
Repeater amplification	-20 dB	0 dB	
Power of 144 MHz xmtr	IR, SR, DR	NP, RR, GR	N:10
Repeater amplification	-10 dB	0 dB	
Power of 28 MHz xmtr	ID, SD, DD	ND, RD, GD	N:10
Repeater from 21 MHz	Off	On	
Power-supply voltage for IF amp/RTR with AGC	IG, SG, DG	NG, RG, GG	N:5
Repeater from 144 MHz	Off	On	
Power-supply voltage for IF amp/RTR with AGC	IU, SU, DU	NU, RU, GU	N:5
Service repeater channel	Off	On	
Power supply for IF amp/ RTR without AGC	IW, SW, DW	NW, RW, GW	N:5
Power of first beacon	Max.	Min.	
Service information	IK, SK, DK	NK, RK, GK	
Power of second beacon	Max.	Min.	
Service information	IO, SO, DO	NO, RO, GO	
Information read-out from memory-1	Off	On	
Temp. of 28 MHz xmtr	AS, US, KS	MS, WS, OS	N - 10
Information read-out from memory-2	Off	On	
Temp. of 144 MHz xmtr	AR, UR, KR	MR, WR, OR	N - 10
Memory-1 operating mode	Read[?-Khran.]	Write[?-zap.]	
Temperature of PS-20	AD, UD, KD	MD, WD, OD	N - 10
Memory-2 operating mode	Read[?-Khran.]	Write[?-zap.]	
Temperature of PS-9	AG, UG, KG	MG, WG, OG	N - 10
Information output from on-board memory-4	via Beacon-1	via Beacon-2	
Power-supply voltage for second unit (PS-9)	MU, WU, OU	AU, UU, KU	N:5
Sensitivity of robot 21 MHz receiver	-10 dB	Max.	
Voltage of IF amplifier in 21 MHz receiver	AW, UW, KW	MW, WW, OW	N:5
Sensitivity of robot 144 MHz receiver	-10 dB	Max.	
Voltage of IF amplifier in 144 MHz receiver	AK, UK, KK	MK, WK, OK	N:5
Service communication power	Max.	Min.	
On-board log full (yes, no)?	AO, UO, KO	MO, WO, OO	

[Legend below illustration on first page of insert]

On-board radiotechnical complex BRTK-10: 1 and 13 - secondary power supplies; 2 and 12 - 21 and 145 MHz receivers; 4 - connectors to the antenna-connection unit; 5 and 11 - 29 and 145 MHz transmitters; 6 - switching unit; 7 and 8 - telemetry unit; 9 - control connectors; 10 - radio-control-link decoders; 14 - on-board log.

[Flow chart appearing below legend on first page of insert]



The value of analogue parameters is presented in the form of a two-digit numeral from 00 to 99 in the decimal counting system. An error of 1% from the measured value can occur in the analogue-digital conversion, plus or minus one unit of account [plyus-minus odna yedinitsa otcheta].

Data for decoding telemetry information for radioamateurs are presented in Table 2 [see page 13 above]. To obtain the value of the parameter in conventional units (voltage in volts, power in watts, temperature in degrees Celsius), it is necessary to apply the two-digit numeral N following the letters in the group, to the formula in the last column of the Table.

Based on the value of the analogue parameter, one can in addition determine whether the device in question is switched on or off. For example, if the value of the parameters AW (or UW or KW) or MW (or WW or OW) equals 42 to 48, then the IF amplifier of the 21-MHz-band receiver is switched on and the robot is available for operation with radioamateurs in the band in question. But if the value of this parameter is 00 or 01, then the amplifier is switched off and the automatic answered [the robot] is not operating in the 21 MHz band.

As has already been said, four levels of amplification reduction (by 0, 10, 20, and 30 dB) are provided for optimal adaptation of the repeater channel to conditions involving the reception of earth stations. The actual reduction in amplification is determined as the sum of the discrete values decoded in accordance with the second and third rows [grafy] of Table 2 [see page 13 above].

A functional diagram [Funktsional'naya skhema] of the telemetry system is presented in the figure [see page 12 above].

Analogue parameters in the form of corresponding voltage values enter at the input switch, which connects them in sequence to the analogue-digital converter [analogo-tsifrovoy preobrzovatel'] (ATsP). This consists of a comparator, a command unit [uzel upravleniya], an impulse counter [schetchik impul'sov], and a step-voltage generator [generator stupenchatogo napryazheniya] (GSN). As a result of the operation of the analogue-digital converter, the counter is placed in a condition [ustanavlivayetsya] v sostoyaniye] corresponding to a particular input voltage. This is then used to form numbers in Morse code which characterize [kharakterizuyut] the analogue parameter.

The letter indices in Morse code are formed on the basis of codes produced by the special generator. The generator takes into account the status of the distributor controlling the input switches, the value of discrete paremeters, and service information.

The operation of all telemetry-system units [uzly] is synchronized by a beat/frame/clock-time [[[? - taktovyy]]] generator.

The first months of operating of RS10 and RS11 show that radioamateurs are confidently mastering the new on-board repeater bands and robot operation.

We shall be happy to receive radioamateurs' reactions, comments, and suggestions aimed at improving the on-board radiotechnical complex.

pp. 11 - 12: "THOSE ON THE RIGHT FLANK OF SOVIET RADIOSPORT" ["PRAVOFLANGOVYYE SOVETSKOGO RADIOSPORTA"], by N[ikolay Valentinovich] Kazanskiy, UA3AF, Deputy Chairman, Federation of Radio Sport of the USSR. [On leading radiosportsmen and radiosportswomen of the USSR. An asterisk preceding a person's name indicates that his photograph appears in the article.]

*Konstantin Aleksandrovich Shul'gin, UA3DA. In 1948 became first national shortwave radiocommunication champion, making 266 contacts in 24 hours. Candidate of Technical Sciences, Honorary Master of Sport of the USSR [pochetnyy master sporta SSSR], and Deputy Chairman of the Federation of Radio Sport of the USSR. On the air almost daily.

Georgiy Rumyantsev, UA1DZ, from Leningrad. Holds number of shortwave records, European ultrashortwave record, and over seventy victories in All-Union and international ultrashortwave, radio-mixed-events, and "fox-hunting" competitions; European fox-hunting champion. Excellent constructor. Master of Sport of the USSR International Class.

*F. Roslyakov took part in the first on-site championship of the USSR, held in 1948. A demobilized radioman from Kaliningrad, he was of twelve top radiomen who competed in the settlement of Rastorguyevo near Moscow. After a three-day struggle, he earned the title of national champion, having established the first all-Union record for receiving letter radiograms -- 320 characters per minute (under the "Paris" system). He went on to earn the title of champion many times.

*S. Zelenov is a talented successor to Roslaykov. Since age of 15 has engaged in speed reception and transmission of radiograms. Over 25 times he has earned the title of champion of the USSR, of the Russian Federation [RSFSR], and of the Armed Forces, not to speak of many victories at international competitions. Master of Sport of the USSR International Class.

*Viktor Verkhoturov has been champion of the USSR in foxhunting many times. A brilliant victory in the 1977 championship of the USSR earned him three gold medals and made him absolute national champion. Recently he defended his doctor's dissertation for the title of Doctor of Technical Sciences. Master of Sport of the USSR International Class.

*Anatoliy Grechikhin became active in foxhunting in 1959. Two years later won gold medal as national champion and bronze medal at first European championship. Won two gold medals and title of absolute continental champion at following European championship. Now teaches at one of the institutes at Gor'kiy.

Today the traditions of our famous champions are carried on by their younger colleagues. Ten years ago G. Petrochkova and *V. Chistyakov were the first to receive the title of Meritorious Master of Sport [zasluzhennyy master sporta].

N. Chernyshova of Moscow, army man Ch. Guliyev from near Moscow, I. Volotorov from Latvia, M. Zhilin from L'vov, N. Asaulenko [also] from the Ukraine, and O. Bezzubov and E. Aryutkina from Penzenskaya Oblast' earned the title of champion during the 70th anniversary year of Great October.

Others qualifying as right-flankers of Soviet radiosport include N. Tartakovskiy from Kiev, G. Patko from Moscow, A. Glotov from Krasnoyarsk, V. Goncharskiy from L'vov, V. Rakintsev from Omsk, and L. Krupenko from Yakutsk.

pp 15 - 16: "LOOK AT YOURSELF" ["OGLYANIS' NA SEBYA"], by L. Lada.

In this period prior to the DOSAAF Congress, particularly large numbers of letters to the editors are being received from shortwavers. Along those addressed to the leading DOSAAF organs are others on the special responsibility placed on any amateur going on the air. Are we always correct with our colleagues, is our on-the-air conduct always beyond reproach? Certainly the time has come for each of us, as we criticize things that hold back the development of this attractive form of sport, to look at himself and to analyze his actions self-critically.

Here's what our reader V. Andreyev, RB5IX, from Dobropol'ye, Donetskaya Oblast', writes on the subject of the honor code of the Soviet shortwaver.

"The number of amateur radio stations in our country is growing steadily. In general this is good, but the quality of operating of a great many of our radioamateur-shortwavers and their operating style leave something to be desired.

"This cannot fail to cause concern. It's generally known that in the capitalist countries the mass media are filling people's (including radioamateurs') minds with a huge avalanche of all kinds of nonsense and slander about Soviet people and about our great country.

"Under these conditions it's hard for even an honest and decent person to sort things out. Just what will he think of us, about how we get along with others, listening to some of our "poor excuses for shortwavers"? What will he tell his neighbors and friends? It's not hard to guess. There are many examples.

"Thus, on 31 January 1986 the operator of UC9CZI, at 10:30, interrupted a rare contact by Czech radioamateur OK3EY with YR6TC. No matter how much OK3EY begged him to wait a few minutes and not to interfere, the UZ9CZI operator stubbornly, for a period of 10 minutes, called him, stating that he was

also DX since he was located in Asia! On 20 February 1986 hundreds of radioamateurs were awaiting the appearance on 3,645 of a rare DX expedition from Africa -- S90AS. A list was begun. Here there exists a specific procedure: The list is taken by area. Suddenly RA4NAI appeared and began incessantly giving his callsign. He didn't react to remarks made to him. As a result the Italian shortwaver taking the list refused to inscribe any Soviet radioamateurs. But even this wasn't enough for RA4NAI, who began to call S90AS, even though S90AS wasn't supposed to appear until two hours later... .

"Such radioamateurs disgrace our country and all U's and R's. There is no room for them on the air."

V. Zuyev, UW0AX, complains of special-call stations that don't QSL. A. Serov, UA3PNN, agrees and suggests reviving the "I ask for a QSL card from..." sub-column [of the "CQ-U" column] in "Radio" magazine; UA3PNN cites a favorable example that all should emulate: In only a month's time he received a QSL from special-call station U2CES, signed by all of its YL operators. UW0AX also suggests that information on an event or person depicted on a Soviet QSL card be printed in English rather than Russian, so that an amateur from Tanzania or the Republic of Vanuatu can understand.

UW0AX assumes that the workers of the CRC will draw the correct conclusions. It is necessary, finally, to put our complicated hobby in order, he adds. Many problems have accumulated. He believes an urgent need has developed to conduct an all-Union conference with participation by leading sportsmen from all oblasts of the USSR, from the FRS USSR, and from "Radio" magazine, as well as by representatives of the CC DOSAAF USSR and of the CRC of the USSR. A businesslike and frank discussion should be held on problems and on ways to resolve them.

It is hoped [concludes the author] that the remarks and suggestions of our readers will not go unanswered.

[Note following the article:]

From the editors: Accommodating [Idya navchtechu] the many wishes expressed by radioamateurs, the CC DOSAAF USSR and the Federation of Radio Sport of the USSR have adopted a decision to hold an All-Union Conference of Radioamateurs [Vsesoyuznaya konferentsiya radiolyubiteley] in December 1988.

p 46: [Obituary] On 22 August [1987], in his 62nd year, Kommir Vasil'yevich Ivanov, Chief of the State Telecommunication Inspectorate of the Ministry of Communication of the USSR since 1975, died. He actively participated in the activities of the International Telecommunication Union. A friend of Soviet radioamateurs, he had been, since 1970, an active member of the editorial board of "Radio" magazine.

pp 63 - 64: "CQ-U."

INFO*INFO*INFO, edited by A. Gusev, UA3AVG

FIRST SATELLITE RADIOCOMMUNICATION CHAMPIONSHIP

On 6 December 1987, from 0000 to 2400 Moscow Time, the First Satellite Radiocommunication Championship will take place.

During the competitions, participants will exchange five-character control groups, consisting of a serial number (beginning with 001) and two letters indicating the WW locator field in which the station is located.

Operating modes [Rezhim raboty]: Transmission on the 15-meter and 2-meter bands, reception on the 10-meter band. The specific band segments to be translated and to be used during the championship will be announced at least one week in advance. Operating modes: Telephone, telegraph, and mixed (CW/FONE). The reporting period is 24 hours.

For a contact within one's own sector, with a neighboring sector, and with a sector separated by one sector, 2 points are awarded. If there is a separation of two or three sectors, 3 points are awarded; if four sectors 4 points; if five sectors 5 points, if six sectors 10 points; if seven sectors 15 points.

[Paragraph on SWL scoring.]

Results will be tallied in four subgroups: Teams of collective stations, operators of individual stations, teams of observer [SWL] stations, and individual observers [SWL's]. This is an individual championship, so the champion of satellite radiocommunication of the USSR will be determined from among the operators of individual stations.

Reports on participation in the championship are to be submitted on the standard form for ultrashortwave competitions; the satellite via which the QSO was made should be shown under "remarks." The form must be sent not later than 21 December 1987 to the address: 123511, Moskva, Pokhodnyy proyezd, 23, TsRK SSSR imeni E. T. Krenkelya (sudeyskoy kollegii) [Judges' Collegium, Central Radio Club of the USSR Named After E. T. Krenkel', 23 Pokhodnyy Proyezd, 123511 MOSCOW].

[End of main section of summary translation]

Please send corrections and comments, for possible inclusion in a future issue, to:

Dexter Anderson, W4KM
150 Eleventh Street SE
Washington DC 20003-3911 USA

[Summary translations of selected articles from the newspaper Sovetskiy Patriot (SP), published twice weekly by the military training organization DOSAAF. Amateur radio news appears in one of three ways:
(1) In sequentially-numbered columns entitled "NLD" ("Na lyubitel'skikh diapazonakh" - "On the Amateur Bands"), dated the same as the newspapers containing them and edited by Boris Grigor'yevich Stepanov, UW3AX;
(2) within articles on sports or other topics;
(3) in independent articles.]

NLD-1241, 4 November 1987:

COMPETITIONS [CONTESTS]

In the OK DX CONTEST (see previous issue), contacts with Czechoslovakian stations operating on board ships of the passenger and merchant fleet (using callsigns in the OK4.../MM series) are worth one point. Collective stations must enter in the multi-op/single-transmitter category.

The segment 1,820 - 1,870 kHz may be used in the RSGB 1.8 MHZ SECOND CONTEST, but Soviet amateurs must restrict transmission to above 1,830 kHz, resorting to split-frequency operation (QSX) if necessary.

In the European "Shortwave Field Day" ["Polevoy KV den'"], RA3DX took first place with 139,444 points among stations operating under normal conditions; UA4WEJ took fourth place, UR2RIY fifth, and UA4WFA seventh. In the category involving operation under field conditions by individual operators, DL0LI/p came in first with 348,951 points and UA6AX/p 13th with 86,616 points; among teams, DK0CL/p took first place with 555,104 points, and UZ4FWA 21st with 284,064 points.

CLUB NEWS

The expedition by Lipetsk shortwavers to the Nakhichevanskaya Autonomous Soviet Socialist Republic ["Oblast'" No. 002, non-RSFSR "letter-letter" identifier "D-N"] resulted in over 5,000 QSL's with 130 oblasts and 94 countries in ten days. Over half of the contacts were made on 80 and 160 meters. Dispatch of QSL cards will begin in the first quarter of 1988. Submitted by O. Ignatov, RA3GU.

RA1TJ/6 made 1,300 QSO's, mainly on the lower-frequency bands, from Krasnodarskiy Kray in July. QSL's should be sent to: 173000, Novgorodskaya oblast', g. Valday, pl. Svobody, RK DOSAAF, QSL byuro [QSL Bureau, DOSAAF Rayon Committee, Liberty Square, 173000 VALDAY (Novgorodskaya Oblast')]. Submitted by P. Sergachev, RA1TJ, ex-UA0JDX, ex-UB5JEA.

From 1970 to 1983, RB5JT was UAOYAD and during the second half of 1983 UAOYAD/U5J. QSL cards have been sent for all contacts made using these callsigns. Anyone who did not receive a card may request a duplicate via 333002, g. Simferopol', pr. Kirova, 1, Simferopol'skaya RTSh DOSAAF [Simferopol' Radio Technical School of DOSAAF, 1 Kirov Prospekt, 333002 SIMFEROPOL']. [NOTES: The RSFSR "number-letter" identifier OY equates to the Tuvinskaya Autonomous Soviet Socialist Republic, "Oblast'" No. 159. This rare "Oblast'" is the former Tannu-Tuva of pre-World War II philatelic renoun. Tannu-Tuva was annexed by the USSR in 1944 as part of the RSFSR. RB5JT has apparently moved to a milder Crimean climate: His present QTH, Simferopol', is in Krymskaya Oblast', No. 067, non-RSFSR "letter-letter" identifier B-J.] Submitted by A. Mikhal'skiy, RB5JT.

DISTANT STATIONS

Stations operating with low power group themselves around the following frequencies, plus or minus QRM: 1,843, 3,560, 7,030 (US stations 7,040), 14,060, 21,060, and 28,060 kHz.

NLD-1242, 11 November 1987:

COMPETITIONS

The All-Union 160-Meter-Band Radiocommunication Competitions for "Radio" Magazine Prizes [Vsesoyuznyye sorevnovaniya po radiosvyazi na diapazone 160 metrov na prizy zhurnala "Radio"] will take place from 2000 to 2200 MSK [1700 to 1900 UT] 21 November (first round) and from 0000 to 0200 MSK 22 November [2100 to 2300 UT 21 November] (second round). Rules are the same as last year, as given in "Radio" #09/1985 and #09/1986. Reports on all-Union competition forms are to be sent by 1 December to: 670013, Buryatskaya ASSR, g. Ulan-Ude, ul. Klyuchevskaya, 41, OTSh DOSAAF, sudeyskoy kollegii [Judges' Collegium, DOSAAF Combined Technical School, 41 Klyuchevskaya Street, 670013 ULAN-UDE (Buryatskaya ASSR)]. [NOTE: The Buryatskaya ASSR is "Oblast'" No. 085, RSFSR "number-letter" identifier OO - ZERO OSCAR.]

DIPLOMAS [CERTIFICATES]

Two new RSGB WITUZ diplomas for working ITU geographical zones for broadcasting are to be applied for at: 199034, Leningrad, naberezhnaya leytenanta Shmidta, 37, LGRTSh DOSAAF, diplomnoy komissii [Diploma Commission, Leningrad City Radio Technical School of DOSAAF, 37 Lieutenant Shmidt Embankment, 199034 LENINGRAD].

DISTANT STATIONS

EW7C/U9J will be active until 31 [sic] November on all shortwave bands, CW and SSB. QSL cards should be sent to: 220094, Minsk, ab./yashch. 192, UC2ABA [Amateur Station UC2ABA, P. O. Box 192, 220094 MINSK]. INFO UA9JET. [NOTE: The RSFSR "number-letter" identifier 9J equates to the Khanty-Mansiyskiy Avtonomnyy Okrug [Autonomous District], "Oblast'" No. 162. See the last page of the annex to summary translation RADIO #06/1987 regarding a similar expedition.]

NLD-1243, 15 November 1987:

COMPETITIONS

[Rules, ALL AUSTRIA CONTEST, 160m, 21 - 22 November 1987.]

CLUB STATIONS

Reports for the activity days sponsored by the amateurs of Noginskiy Rayon of Moskovskaya Oblast' on 27 November, go to: 144003, Moskovskaya oblast', g. Elektrostal', ul. Nikolayeva, d. 36-a, komitet DOSAAF [DOSAAF Committee, 36-a Nikolayev Street, 144003 ELEKTROSTAL' (Moskovskaya Oblast')].

DISTANT STATIONS

PY0FZ, on the island of Fernando de Noronha, operated by PY7ZZ, is expected to operate from 21 November to 1 December. On the 21 MHz band he'll be active around 21,020 kHz (CW) and 21,245 kHz and 21,295 kHz (SSB). INFO UL7PBH and UA3-170-386.

J6DX plans to operate from 23 November through 6 December, and after the CQ WW DX CONTEST the participants will use individual callsigns followed by /J6L. They will concentrate on 160m. Send QSL cards for this expedition to P. O. Box 91, Greenville, Ohio 45331, USA. INFO UA4QM.

COMPETITIONS

[More on rules for ALL AUSTRIA CONTEST (160m), begun in last issue.]

According to data of the Monitoring Service [? - "Control" Service] of the Central Radio Club of the USSR Named After E. T. Krenkel' [kontrol'naya sluzhba TsRK SSSR imeni E. T. Krenkelya], violations of the frequency allocation [[[raspredenleniya]]] at 160 meters continue to occur in international shortwave competitions. About 30 Soviet contestants in the 'phone portion of the CQ WW DX CONTEST operated outside of the segment allocated [[[vydelennogo]]] to shortwavers in our country. Several of the violators based their actions on operation outside of this segment by specific [Soviet] collective and individual stations. It should be kept in mind that a number of leading stations, upon application by the Federation of Radio Saport of the USSR, actually are permitted to use frequencies below 1,830 kHz in international competitions. But this permission applies only to these stations and does not constitute a basis for out-of-band operations by other shortwavers.

The First Satellite Radiocommunication Championship of the USSR [Pervyy chempionat SSSR po radiosvyazi cherez ISZ] will take place from 0000 to 2400 MSK on 6 December. [MSK = Moscow Time; in the winter period MSK = GMT/UT + 3.] QSO's via "Radio"-series satellites count, no matter what the mode (including mixed mode). Transmitting bands are 2 and 15 meters, and the receiving band is 10 meters. Control numbers [exchange] consist of a serial number and two letters corresponding to the worldwide locator field [sektor] in which the station is situated. Contacts within one's own field, a neighboring field, or one field away count one point each; three fields away 3 points, four fields away 4 points, five fields away 5 points, six fields away 10 points, seven fields away 15 points. [Rules for SWL's are given.] There are four categories: Collective stations, individual stations, observer-point [SWL-station] teams, and observers [individual SWL's]. Sportsmen of not less than the first category may take part. Teams of collective stations and observer points consist of three operators.

CLUB NEWS

Stations with EW4, EM4, EO4, and U4 prefixes will operate until 22 November. Contacts with them are worth 10 points each for the "45 Years Since the Battle of Stalingrad" diploma.

The distribution of QSL cards for contacts with 4K1A continues. Logs for the period April - October have been received. QSL's [for 4K1A] should be sent to: 196070, Leningrad, ab./yashch. 1 [P. O. Box 1, 196070 LENINGRAD]. Submitted by B. Gnusov, UA1DJ.

Sovetskiy Patriot, 22 November 1987, p 4, independent article:

WHAT ARE THE RADIOSTATIONS BEING SILENT ABOUT?

by M. Nemirova, "Sovetskiy Patriot" correspondent

[Complaints about the failure to develop amateur radio in the areas of Georgia affected by snowstorms [last] winter [see summary translation RADIO #02/1987, page h]. Assistance was rendered by amateurs who were flown by helicopter to snowed-in mountain villages, from where they maintained communications with Mestia, the center of Mestiyskiy Rayon, and with Tbilisi [the capital of the Georgian SSR] for two and a half months. The reporter particularly faults the Republic Sport Technical Club. She was told that in Mestiyskiy Rayon there still isn't a single radio amateur, despite plans, following the disaster, to develop amateur radio.]

NLD-1245, 22 November 1987:

DIPLOMAS

[Changes in rules for RSGB diplomas.]

[Rules for CCC ("Commonwealth Century Club") diploma.]

NLD-1247, 29 November 1987:

IN THE FEDERATION OF RADIO SPORT OF THE USSR

On 26 November an expanded session of the Presidium of the FRS USSR [raschirennoye zasedaniye prezidiuma FRS SSSR] was held "On the State of Amateur Radio in the Country and Tasks for its Further Development." The Chairman of the Presidium of the FRS USSR, Yu[riy Borisovich] Zubarev, spoke on the restructuring [perestroyka] of the FRS USSR and local FRS's. The basic speech [presumably Zubarev's speech] and information provided by representatives of the Radiosport Department of the Central Committee of DOSAAF USSR [otdel radiosporta TsK DOSAAF SSSR] and of the Central Radio Club of the USSR Named After E. T. Krenkel' covered examination of proposals contained in amateurs' letters on various aspects of the amateur radio movement in our country. In connection with the holding next year of an All-Union Conference of Radioamateurs [vsesoyuznaya konferentsiya radiolyubiteley], the Presidium confirmed K. Khachaturov, UW3AA, as Chairman of the Organizing Committee [predsedatel' orgkomiteta]. The dates and agenda will be examined at a future session of the Presidium. A decision was taken on creating a DX Club of Soviet shortwavers, and A. Kucherenko, UT5HP, was confirmed as Chairman of the Council of the Club [predsedatel' soveta kluba]. Rules [polozheniye] for the Club will be worked out in the near future. Taking part in the session were V. Demin, First Deputy Chairman of the CC DOSAAF USSR; A. Vinnik, Chief of the Administration of Technical and Military-Application Forms of Sport; A. Korol'kov, Deputy Chief of the State Telecommunication Inspectorate of the Ministry of Communication of the USSR.

The Shortwave Committee of the FRS USSR [KV komitet FRS SSSR] has begun studying with situation as regards SWL's (competitions, clubs, diplomas, and so forth). Suggestions should be sent to G. Chliyants, UY5XE, at 290000, g. L'vov, ab./yashch. 19 [P. O. Box 19, 290000 L'VOV].

RADIOAMATEUR SATELLITES

Reference data for calculating RS-11 passes during the First Satellite Communication Championship of the USSR. Since universal time is used, the first two orbits occur 5 December and all subsequent ones 6 December. Orbits 2,271 to 2,284.

2043 - 095; 2229 - 122; 0014 - 148; 0159 - 175;
0344 - 201; 0529 - 227; 0714 - 254; 0859 - 280;
1044 - 307; 1229 - 333; 1414 - 359; 1559 - 026;
1743 - 052; 1929 - 078. Contributed by L. Maksakov, RA3AT.

[End of Sovetskiy Patriot Annex]